



Program Book

of

The 2nd International Seminar on Operational Research

InteriOR 2013

OR for Industry, Environment and Society

August 26 - 27, 2013
Medan, Indonesia



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Program Book

The 2nd International Seminar on Operational Research
(InteriOR 2013)

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August 26 – 27, 2013
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Department of Mathematics
Faculty of Mathematics and Natural Science

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Preprocessing and Probing Techniques in Simplifying Open Capacitated Vehicle Routing Problem (Ocvrp) Model

(Case Study: Rubbish Transportation in Kecamatan Sukarami Palembang City)

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Abstract. Rubbish transportation activity in Palembang city is one of the applications of Vehicle Routing Problem (VRP). Rubbish transportation system in Palembang usually been done in many phases. Rubbish collected from homes usually been collected to the nearest temporary rubbish collection place (TPS). This rubbish will be delivered to the final rubbish collection place (TPA). This system divides into the working areas (WK). The issue in this study is Open Capacitated Vehicle Routing Problem (OCVRP) on vehicle routes of rubbish transportation in Kecamatan Sukarami Palembang city by using Preprocessing and Probing techniques to find a simpler OCVRP. The results show that the optimal route of rubbish transportation vehicle on OCVRP models before using preprocessing and after using preprocessing technique is the same. In addition, the results obtained show that the number of constraints is reduced; the number of variables is reduced; the number of iteration is reduced; it does not change the value z ; and z in the optimum model has fewer variables. To find the solution of OCVRP models was used LINDO software, so the models found were simpler and more efficient in its solution process.

Keywords: OCVRP, preprocessing technique, rubbish transportation, vehicle routes.